

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Venson M. Shaw, et al.) Docket No.: 12557RR
Serial No.: TBD)
Filed: December 21, 2000) Examiner: TBD
For: SYSTEM AND METHOD FOR SENDER)
INITIATED CACHING OF)
PERSONALIZED CONTENT)

PRELIMINARY AMENDMENT

Director of the U.S. Patent and Trademark Office
Washington, D.C. 20231
BOX PATENT APPLICATION

Dear Sir:

Prior to examination of the above-identified patent application, please enter the following amendments:

IN THE SPECIFICATION

Page 13, line 5, please add the following new paragraphs:

--It is contemplated by the present invention that predictable user entries are behaviors known by an intelligent agent deployed in the memory manager (not shown). Artificial intelligence techniques such as deterministic algorithms are used to determine users' predictable behaviors. Deterministic algorithms use a set of variables as the input and then use some rules based on user's behavior or some other pattern to drive the computer-controlled game elements or objects based on these inputs. Prediction algorithms may also use heuristic search algorithms, neural networks, genetic algorithms, temporal differences, genetic and evolutionary algorithms, and other methods. The category of algorithms to be used for predictable user entries involve cognitive gaming theory to learn the behavior of the users by some intelligent agent in the game over periods of time and then apply it to moves in a particular game. An article reporting on the research in predicting a user's moves is Erev, Ido and Roth, Alvin E., *Predicting How People Play Games: Reinforcement Learning in Experimental Games With Unique, Mixed Strategy Equilibria*, American Economic Review, 88, 4, September 1998, 848-881.

Unpredictable user entries refer to those users whose pattern or behavior is not known so that some random intelligent logic needs to be applied when an intelligent agent does not have enough

information to determine the solution. The intelligent agent then may select a random behavior that may become the correct solution for the situation.--

Page 13, line 27, please add the following new paragraph:

--Time is a critical factor for dynamic size allocator 166. There are many suitable allocator schemes such as sequential fits including first fit, address-ordered first fit, next fit, best fit and worst fit. In an embodiment of the present invention, the address-ordered first fit scheme is used to allocate free memory. The data structure used to store this free memory list can be a linear list implementation, segregated free list, buddy system or indexed fits. The speed requirement tend to suggest the segregated free list data structure, which uses an array of free lists where each list holds free blocks of a particular size. When a block of memory is freed, it is simply pushed onto the free list for that size. When a request for a given size arrives, an array list for the appropriate size of memory is looked to service the request. There are several variations on this segregated free lists scheme that can be used. This memory allocation may also followed by a deferred coalescing scheme to actually merge the free blocks. The allocator can be compiled together with the application program (may be gaming, video conferencing etc), rather than linked as a library in the usual way to find how much memory to be allocated for a particular application for a session involving some x number of users. These normal and exception entries in the memory can be filled by prediction algorithm's output which can be part of normal/exception handler system or standalone system that communicates with Normal/Exception handler.--

Respectfully submitted,



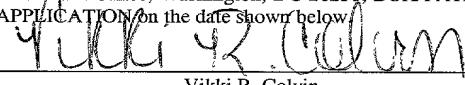
Wei Wei Jeang
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Date: December 21, 2000

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Director of the U.S. Patent and Trademark Office, Washington, DC 20231, BOX PATENT APPLICATION on the date shown below.



Vicki R. Colvin
12-20-00
Date